WHAT IS CLAIMED IS:

1. A process for manufacturing a semiconductor device, comprising the steps of:

providing a wafer having at least an active device and a photo diode array, wherein the wafer has a metallic interconnect layer that electrically connects with the active device and the photo diode array, the metallic interconnect layer has a plurality of bonding pads located on the surface of the outermost metallic interconnect layer, and the wafer has an illumination area located above the photo diode array;

forming at least a micro-lens over the illumination area of the wafer; and

forming a cutting film over the micro-lens.

2. The process of claim 1, wherein the cutting film is directly formed on the curve surface of the micro-lens.

3. The process of claim 1, wherein before the step of forming the cutting film, further comprises a step of forming a passivation layer over the micro-lens so that the cutting film is formed over the passivation layer instead of directly forming over the micro-lens.

4. The process of claim 1, wherein after the step of forming the cutting film, further comprises a step of patterning the cutting film to form a plurality of openings that exposes the respective bonding pads.

5. The process of claim 1, wherein after the step of forming the cutting film, further comprises a step of singulating the chips within the wafer.

6. A photosensitive module, comprising:

a substrate;

an active layer formed over the substrate, wherein the active layer has at least an active device and a photo diode array;

a metallic interconnect layer formed over the active layer, wherein the metallic interconnect layer connects the active device and the photo diode array electrically, and the surface of the outermost metallic interconnect layer has a plurality of bonding pads;

at least a micro-lens formed on the surface of the outermost metallic interconnect layer above the photo diode array; and

a cutting film formed over the micro-lens.

7. The photosensitive module of claim 6, wherein the cutting film covers the curved surface of the micro-lens.

8. The photosensitive module of claim 6, wherein the module further comprises a passivation layer sandwiched between the cutting film and the micro-lens.

9. The photosensitive module of claim 6, wherein the cutting film has a plurality of openings that exposes the respective bonding pads.

10. The photosensitive module of claim 6, wherein the cutting film comprises an infrared cutting film.

11. The photosensitive module of claim 6, wherein material constituting the micro-lens comprises a high molecular weight polymer.

12. The photosensitive module of claim 6, wherein the module further comprises a carrier that electrically connects with the bonding pads.

13. The photosensitive module of claim 12, wherein the carrier is selected from a group consisting a substrate, a lead frame and a flexible carrier.